

REMARKS

Claims 1-4, 6-10, and 12-21 are pending in this application, with Claims 5 and 11 canceled. Applicants respectfully request reconsideration and review of the patent application in view of the amendments and the following remarks.

Before addressing the merits of the rejections, Applicants provide the following brief description of the invention. The invention is directed to a method and system for wirelessly communicating identifying information from multiple model vehicles to a remote control device while the multiple model vehicles remain operational within a model vehicle system. In the field of model railroading, it is known to use a remote control device to communicate commands to model vehicles operating on a layout. Since there may be multiple model trains operating on the layout simultaneously, the remote control device includes an identifier (ID) with each such command so that only the appropriate model train will execute the command. There are many different types of model trains available on the market that may be controlled by the remote control, with many such model trains having distinctive functionality and other characteristics, and so there is a need in the art for a method for introducing the model train to the remote control so that the remote control knows how to communicate with that particular model train. A known method for accomplishing this is for the operator to manually enter identifying information (such as the ID as well as a road name, track number, etc.) into the remote control using a keypad provided on the remote control. Other methods may require a user to remove a model vehicle from the layout to read or configure an ID. These methods are undesirable for some model railroading enthusiasts.

Applicants' invention overcomes these drawbacks in the art by providing the model train and remote control with a system and method for wirelessly communicating the identifying information from the model vehicle to the remote control while the model vehicle remains operational within the model system layout. For example, in one embodiment, a model train that is operational in a track layout may transmit "its train ID, engine number and engine road name, and optionally other data, periodically via an

infrared (IR) transmission.” *Specification*, ¶ 11. This way, the remote control can readily and easily recognize the model train, and thereafter use the ID in commands communicated over a separate interface to the various model trains operating on the layout. To ensure that the remote control only receives identifying information from one model train at a time when multiple model vehicles are simultaneously operational, the invention provides that the ID is transmitted from the model train using only a narrow spatial field, e.g., using an infrared signal from a transmitter that is recessed within a cavity in the model vehicle to limit its angular field of view. A corresponding receiver in the remote control unit may similarly be recessed to further restrict the angular field of view from which the remote control may receive a vehicle ID. For example, Fig. 3 depicts a remote control for which the “receiver is mounted in a recess 234 which acts to limit the field of the reception to a narrow band, . . . [and] the standard viewing angle 248 of the IR receiver 249 is further limited by the use of a recess creating a further reduction in the viewing angle represented by 247.” *Specification* ¶ 30; Fig. 3. The transmission channel used to communicate the ID from a model vehicle to the controller is different from that used to communicate subsequent commands from the controller to the model vehicles.

The Examiner rejected Claims 1–4, 6–10, and 12–21 under 35 U.S.C. § 103(a) as being unpatentable over Palmer (U.S. Pat. No. 4,335,381) in view of Colbert (U.S. Pat. No. 6,322,025) and Nagata (U.S. Pat. No. 6,970,096). Applicants respectfully traverse these rejections.

Palmer discloses a control system for a model train layout that uses a power-line transmitter to superimpose a control waveform on a power signal distributed along the tracks of a model train layout. Various vehicles used in the layout can be constructed with different identification codes using a clip with conductive fingers, some of which are selectively broken off to create a unique binary identification code. *Palmer*, 9:54-65; Fig. 10. The Examiner admits that Palmer fails to disclose that the identification code is ever transmitted to the controller, as required by independent Claims 1, 13, 14, 19, and

21.

The Examiner proposes the addition of Colbert to remedy this deficiency. As an initial matter, Colbert is not analogous art. Colbert is directed to a communication system between an "LCU," a computer operated by an engineer in the locomotive of an actual full-size train, and an "EOT," a transmitter / receiver located in the caboose of the train. *Colbert*, 1:13-31. The communication system is typically operated according to standards and protocols approved by the Association of American Railroads, which specifies frequency bands and communication protocols to enable robust communication of critical operational data, such as marker light status, brake pressure, etc., and to allow transmission of emergency commands, such as emergency braking commands. *Id.* at 2:4-20. Thus, the design of such a system involves high-power, long-range transmitters that must meet fault-tolerance standards and be deployed to protect property and life. A designer of such a system thus faces very different and unique challenges from one designing a model vehicle system in which a short-range, low-power transmitter is used to send commands to multiple vehicles while ensuring that only the intended recipient executes the transmitted command. Colbert is thus not directed to the same field of endeavor as the present Application and is not analogous art for at least this reason.

Furthermore, Colbert is not directed at solving a similar problem as that solved by the present invention. Colbert is directed at determining which signaling protocol an EOT installed in the caboose is using. To do so, the locomotive computer, the LCU, may receive a generic communication from the EOT including an identifying model number that the LCU may look up in a table to determine what kind of communications that particular EOT supports. Colbert is thus directed at determining what kind of device the single EOT in the system is and how to communicate with it. By contrast, the present invention is directed to solving the problem of a controller that broadcasts a command to multiple devices in the system but requires that only certain devices decode and respond to the command. Furthermore, it is directed to providing a method

by which the devices can send a narrow-spatial-field communication back to the remote controller when it is positioned within that narrow field such that the remote controller can receive the transmitted identification code of the particular device without interference from the other devices in the system. Thus, the problem solved by Colbert is not related to the problem solved by the present invention, and Colbert is not analogous art for this additional reason. As such, there is no motivation to combine Colbert with the other references, and the rejection of the claims is improper and should be withdrawn.

Furthermore, Colbert at least fails to disclose or suggest the limitation of "a method for identifying one of **a plurality of devices** in a **model vehicle system**, comprising: positioning a remote control device **near a first one of said devices** while said first device remains operational in the model vehicle system; transmitting an identifying signal (ID) from said first device to said remote control device **via a first communication channel**, . . . so that said ID is **not interfered with by transmissions from other devices**," (emphasis added) as recited by Claim 1, and similar limitations in independent Claims 13, 14, 19, and 21. At most, Colbert discloses communication between a single LCU and a single EOT via an RF interface, and the same interface is used for transmission of a model identification number and for subsequent commands.

The Examiner further acknowledges that Colbert fails to disclose that "the remote control is placed within a narrow spatial field emanating from the device." *Office Action*, p 3. The Examiner proposes the addition of Nagata to remedy this deficiency.

Nagata describes a system in which a "drive" is removed from an operational layout and placed within a concave portion of a transmitter having a lid that can be closed to enclose the drive within the transmitter. *Nagata*, 2:39-49; Fig. 4. The transmitter then transmits a signal **to the drive** to change the identification information of the drive, while the lid prevents the "information-change data from leaking to the outside." *Nagata*, 2:39-49. Rather than **receiving** identifying information from multiple vehicles while the vehicles **remain operational** in the model vehicle system, as

required by Claims 1, 13, 14, 19, and 21, the transmitter of Nagata **transmits** to an isolated drive that has been **removed from the system** and enclosed within a concave portion of the transmitter. *Nagata*, 2:39-49; Fig. 4. Thus, none of the cited references discloses or suggests a system wherein a model vehicle **sends identification information** to a remote controller "wherein said remote control device is only capable of receiving said ID for said first device when said remote control device is placed within a **narrow spatial field** emanating from said first device with a **limited viewing angle**, so that said ID is **not interfered with by transmissions from other devices**," (emphasis added) as recited by Claim 1, and similarly by Claims 13, 14, 19, and 21.

In addition, the present invention solves the particular problem of acquiring such identification codes from devices that **remain operational** within the model train layout while they are being queried by the remote control for their ID information. Even if Nagata is read to obtain identification information from model devices in a model layout because the transmitter of Nagata **sets the IDs** by sending a transmission to a drive, it does not do so in a manner that allows the devices to **remain operational** within the model layout. Rather, the drives of Nagata must be removed from the layout and placed within a recess of the control device. *Nagata*, Figs. 2, 4.

Thus, with respect to independent Claim 1, the proposed combination of references at least fails to disclose "positioning a remote control device near a first one of said devices **while said first device remains operational in the model vehicle system**; transmitting an identifying signal (ID) from said first device to said remote control device via a first communication channel, wherein said remote control device is only capable of receiving said ID for said first device when said remote control device is **placed within a narrow spatial field emanating from said first device with a limited viewing angle**, so that said ID is not interfered with by transmissions from other devices," and further, "wherein said ID is used to provide a command from said remote control device to said first device via a **second communication channel that is separate from said first communication channel**." (emphasis added). The rejection

of Claim 1 is thus improper and should be withdrawn. Inasmuch as Claims 2-4, 6-10, and 12 depend from Claim 1, they are also not rendered obvious, and their rejection should similarly be withdrawn.

With regard to independent Claim 13, the proposed combination of references at least fails to disclose or suggest, "periodically transmitting from a first model train an ID for said first model train ***in a limited field infrared transmission having a limited view angle***" and "positioning a remote control device near said first model train ***while said first model train operates in a model train system*** so that only a transmission from said first model train is received by an infrared receiver in said remote control device." (emphasis added). The rejection of Claim 13 is thus improper and should be withdrawn.

With regard to Claim 14, the proposed combination at least fails to disclose or suggest, "a transmitter mounted in said vehicle for directing a transmission of an identifying signal (ID) that can be received by said remote control unit independent of said communication channel ***while said vehicle is operating in a model vehicle system***; and means for ***limiting a view angle of said transmission so that only a narrow transmission from a single vehicle is received by said remote control unit*** when positioned in a field of said transmission." (emphasis added). The rejection of Claim 14 is thus inappropriate and should be withdrawn. Inasmuch as Claims 15-18 depend from Claim 14, they are also not rendered obvious and their rejection should also be withdrawn.

With regard to Claim 19, the proposed combination at least fails to disclose or suggest, "a receiver mounted in said remote control device, for receiving a transmission from ***said first model vehicle, separate from said communication channel***, conveying an ID of said first model vehicle ***while said first model vehicle remains operational in a model vehicle system***, wherein a ***field of view of said receiver has a limited view angle***." (emphasis added). Thus, the rejection of Claim 19 is improper and should be withdrawn. Inasmuch as Claim 20 depends from Claim 19, its rejection

should similarly be withdrawn.

With respect to Claim 21, the proposed combination at least fails to disclose or suggest, "directing a transmission of an identifier (ID) that can be received ***independent of said first communication channel***, and means for ***limiting a view angle*** of said transmission so that only a ***narrow transmission*** from the first model vehicle is received by a receiver positioned in said field of said transmission," and "a receiver mounted in said remote control device, for receiving a transmission from said first model vehicle, ***separate from said communication channel***, with the ID of said first model vehicle ***while said first model vehicle remains operational within a model vehicle system***." (emphasis added). Thus, the rejection of Claim 21 is improper and should be withdrawn.

In view of the foregoing, Applicants respectfully submit that Claims 1–4, 6–10, and 12–21 are in condition for allowance. Reconsideration and withdrawal of the rejections is respectfully requested, and a timely Notice of Allowability is solicited. If it would be helpful to placing this application in condition for allowance, Applicants encourage Examiner to contact the undersigned counsel and conduct a telephonic interview.

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To the extent necessary, Applicants petition the Commissioner for a one-month extension of time, extending to June 19, 2009 the period for response to the Office Action dated February 19, 2009. The Commissioner is authorized to charge \$65. for the one-month extension of time pursuant to 37 CFR §1.17(a)(1), and any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0639.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'B. Berliner', is written over a horizontal line.

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